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UNIVERSITY OF ALBERTA

MEASURING CODEPENDENCY: CONSTRUCT VALIDATION OF THE INDIVIDUAL OUTLOOK TEST

BY

DIANA L. E. ALEXANDER

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of MASTER OF SCIENCE.

DEPARTMENT OF OCCUPATIONAL THERAPY

Edmonton, Alberta

SPRING 1992

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FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled MEASURING CODEPENDENCY: CONSTRUCT VALIDATION OF THE INDIVIDUAL OUTLOOK TEST in partial fulfillment of the requirements for the degree of MASTER OF SCIENCE.

Sharon Warren
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H. M. Madill

Date: 21 April 1992

To my mother, Catherine, and in memory of my father, William, who taught me to believe in myself.

ABSTRACT

A test of codependency, the Individual Outlook Test (IOT), is subjected to validation procedures and to factor analysis. Specifically, exploratory principal components factor analysis with an oblique rotation of 275 responses to the IOT by an Edmonton sample is performed. Principal components analysis reveals 19 unrotated factors, accounting for approximately 64% of the total variance. A five factor solution is selected on the basis of factor structure and interpretability. This solution accounts for approximately 27% of the variance.

The five oblique factors extracted capture the most characteristic aspects of codependency as cited in the literature, and suggest the presence of an underlying general dimension. The factors are named: I. Self Esteem / External Referenting; II. Dysfunctional Relationships / External Locus of Control; III. Dependency within Relationships; IV. Dysfunctional Family of Origin; and V. Anxiety. External referenting and locus of control indicate aspects of the locus of control dimension thought to underlie the test.

Two selected construct validation procedures of the IOT are also conducted. Eighteen codependents from a local addictions treatment center are tested, using the IOT and another index of codependency. The two instruments correlate highly. A tentative definition of codependency is proposed, stemming from the factors identified in this study.

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CHAPTER 1

INTRODUCTION

Defining and Measuring Codependency

The most recent direction of expansion in the chemical dependency (CD) field lies in an extended focus on family members of chemically dependent persons. The significance of codependency is indicated by the 56 workshops that comprised the 1989 First National Conference on Codependency, the advent of training programs for identifying and assessing codependency both in clients and health care professionals (Harper & Capdevila, 1989), and the inclusion of the concept in graduate and post-graduate academic counselling curricula in the U.S (R. Potter-Efron, personal communication, Oct. 1991; Harper & Capdevila, 1989).

Codependency is believed to be a specific condition which arises as a consequence of prolonged exposure to a highly dysfunctional environment, most often in the context of a relationship with an alcoholic or chemically dependent individual (Brewer, Zawadski, & Lincoln, 1990). It is often described as an emotional, behavioral and psychological condition that is manifested through persistent, self-defeating patterns of relating to others (Riley, 1991; Spann & Fischer, 1990 Subby, 1987; Cermak, 1986a; Cermak, 1986b; Gierymski & Williams, 1986; Wilson Schaef, 1986). These patterns are repeated without insight, and are characterized by an extreme focus outside the self, lack of expression of feelings, and attempts to derive a sense of purpose through relationships (Spann & Fischer, 1990).

It has been recommended that the diagnosis of codependency be limited to those persons who exhibit a pattern of predictable and problematical responses directly attributable to exposure to chemically dependent persons (Potter-Efron & Potter-Efron, 1989; Cermak, 1986a). However, while complex and often conflicting definitions of codependency abound, few valid and reliable assessments of the condition exist in the literature (Harper & Capdevila, 1989). A review of the literature confirms that despite acknowledgement of an imprecise definition and inadequate measurement tools, there is consensus among practitioners in the chemical dependency field that codependency is a legitimate and definable diagnostic entity.

In such a rapidly expanding field, a thorough examination of the postulated constructs associated with codependency using a valid psychometrically derived instrument is urgently needed (Harper & Capdevila, 1990; Potter-Efron & Potter-Efron, 1989a; Cermak, 1986). Preliminary validation studies on a recently developed measure indicate that such a tool, the Individual Outlook Test (IOT), exists (Sim, 1991). In this study, construct validation of the IOT has been initiated by comparing it to another instrument, the Codependency Assessment questionnaire (Potter-Efron & Potter-Efron, 1989a), believed to measure codependency, and by factor analysis of the IOT items.

Perspective of the Problem

The current body of codependency literature presents a confusing array of differing opinions as to the nature, symptomatology, etiology, and prognosis of the condition. Definitions of codependency are broad, ranging from a "primary disease" (Young, 1987; Whitfield, 1984; Wegscheider, 1981) to an "emotional, psychological and behavioral condition" (Subby, 1987; Friel, Subby & Friel, 1984). Broader yet are the parameters of its symptomatology: some authors have listed as few as 18 primary symptoms (Spann & Fischer, 1990), while others assert that more than 100 symptoms of codependency exist (Wilson Schaef, 1986). Many symptoms interlock and perpetuate pathological patterns making diagnosis and treatment difficult and confusing, particularly in the absence of valid and reliable instruments to measure the condition (Arnold, 1990; Harper & Capdevila, 1990; Subby, 1987; Cermak, 1986a; Cermak, 1986b; Gierymski & Williams, 1986; Wilson Schaef, 1986).

Becvar, Becvar and Bender (1982) and others (Subby, 1987; Beattie, 1987; Cermak, 1986a) have documented a need to establish a "formal agency and a new body of professionals" to study and treat newly identified conditions such as codependency from a nonpathological perspective. A review of the literature casts considerable doubt on the foundations and feasibility of this proposition. Although there is agreement that the symptoms associated with codependency result in profound human suffering, no two authors adhere to the same definition of codependency and many freely intermix descriptive theoretical frameworks (Cermak, 1986a). Contradictions in the conceptual structure and inadequate measurement tools make codependency difficult to assess and therefore, treat in a valid, consistent manner. Symptoms and relapse cannot be monitored reliably (Harper & Capdevila, 1990; Young, 1990; Wilson Schaef, 1986; Whitfield, 1984).

The presence of untested assessment and research instruments and lack of congruency in the literature hold other alarming consequences for both clients and professionals (Brewer, Zawadski, & Lincoln, 1990; Fisher & Beer, 1990; Potter-Efron & Potter-Efron, 1989a; Hall & Wray, 1989; Friel, 1985). Some authors assert that both psychiatric and somatic disorders are highly correlated with codependence, including dysthymia, anxiety, obsessive-compulsive disorders, hypertension, and other psychosomatic complaints (Cermak, 1991. Although such conclusions are unsubstantiated by the literature, they have unnecessarily stigmatized spouses of chemical dependents, and have resulted in the use of inappropriate therapies and serious misuse of health insurance funds (Harper & Capdevila, 1990; Fingarette, 1988).

Since codependency is thought to be more amenable to treatment than either chemical dependency or character pathologies, valuable time is lost by treating codependents according to existing chemical dependency or personality disorder models (Cermak, 1986a). However, codependency lacks diagnostic legitimacy (Potter-Efron & Potter-Efron, 1989a; Cermak, 1986b). Insurance companies do not recognize the existence of codependency, and therefore will not pay for its treatment, thus forcing clinicians to fit the symptoms into an existing, reimbursable diagnostic category (Cermak, 1986a). As a result, inappropriate diagnoses increase health insurance coverage costs but are of little benefit to codependents (Harper & Capdevila, 1990; Cermak, 1986a; Fingarette, 1988). Fingarette (1988) draws attention to the "billions in health insurance coverage spent on inpatient and outpatient alcoholism treatment alone". Thus, placing codependency into existing, and reimbursable, diagnostic categories ultimately benefits the treatment providers rather than those who receive treatment. The presence of inconclusive measurement tools encourage attempts to locate codependent symptoms in primary disease or personality disorder models (Harper & Capdevila, 1990).

More alarmingly, the absence of valid assessment criteria tacitly encourages subjective diagnoses (Harper & Capdevila, 1990; Potter-Efron & Potter-Efron, 1989; Cermak, 1986a), presenting serious questions about about professional ethics and therapeutic efficacy (Harper & Capdevila, 1990). Indeed, such uncritical acceptance seems to be at odds with the primary obligation of the helping professions to "first of all, do no harm" (Becvar, Becvar & Bender, 1982).

Despite acknowledgment of the serious consequences of imprecise measurement and vague definition (Harper & Capdevila, 1990; Cermak, 1986a; Gierymski & Williams, 1986; Becvar, Becvar & Bender, 1982), many measurement instruments in this area have largely been developed solely on the basis of face validity. It is incumbent on members of

the health care professions to determine the validity of instruments used for research and clinical purposes.

Previous Research and Existing Measures of Codependency

Early research suggested that the painful symptoms exhibited by wives of chemical dependents originated from personality disturbances which preceded their marriage (Burgin, 1976; Edwards, Harvey & Whitehead, 1973; Corder, 1964; MacDonald, 1956). Despite growing evidence to the contrary (Harper & Capdevila, 1990; Potter-Efron & Potter-Efron, 1989b; Subby, 1987; Cermak, 1986a/b), the focus remains on symptomatic spouses from an obsolete disturbed personality perspective (Harper & Capdevila, 1990; Miranti-Burnett, 1984; Nace, Dephoure, Goldbert, & Cammarota, 1982; Coleman, 1981; Jackson, 1954).

A variety of measures are currently being used for clinical and research purposes (Brewer, Zawadski, & Lincoln, 1990; Fisher & Beer, 1990; Potter-Efron & Potter-Efron, 1989a; Hall & Wray, 1989; Friel, 1985). Friel (1985) constructed a codependency questionnaire based on subjective, clinical impressions of what constituted codependency. He submitted the questionnaire to other counsellors for use in their own practices to determine its utility, and to obtain data which could be used to enhance the psychometric properties of the instrument. Although it violated several principles of test construction outlined in the APA Standards for Educational and Psychological Testing (1985), the instrument was adapted by Hall & Wray (1989) for use in a study measuring codependency in hospital-based nursing practices. The purpose and nature of the adaptations were unclear, and their potential effects on the results of the study were not explained.

Other measures, such as the Fisher and Beer (1990) assessment, were based on the work of Beattie (1987). The questionnaire was created by listing 25 codependent characteristics in ten of the 14 categories identified by her (Fisher & Beer, 1990). Although validation procedures were not described, the instrument was subsequently co-administered with a valid measure of self-esteem (Fisher & Beer, 1990; Coopersmith, 1967). The Pearson correlation suggested a moderate and negative association between codependency and self-esteem (Fisher & Beer, 1990).

Brewer, Zawadski, and Lincoln (1990) investigated the characteristics of alcoholics and codependents who did and did not complete treatment. Although the inclusion criteria required a diagnosis of codependency, a description of diagnostic procedures used to identify the codependent sample was not included. This comparison study elicited valuable

demographic data associated with compliance for both samples. However, the theoretical basis of the study focused on alcoholism and the interpretations may be questioned on the basis of sampling procedures.

The Codependency Assessment Questionnaire (CAQ)

The Codependency Assessment questionnaire was developed on the basis of clinical judgement and a comprehensive literature review (R. Potter-Efron, personal communication, Oct. 1991). The purpose of the Codependency Assessment questionnaire is to elicit information about codependent behaviors directly from clients. It may be administered within the context of an individual interview or as a group test (Potter-Efron & Potter-Efron, 1989a).

The content and theoretical basis of the CAQ closely parallels that of the IOT. The test is accompanied by assessment criteria as cited in the literature, and is divided into 8 categories, or main characteristics associated with codependency. These categories appear as headings in each of the test sections. Each question probes the criteria associated with that category and is answered 'yes' or 'no'. For any category to be considered positive for codependency, any two questions in that category must be answered in the affirmative. An individual must have scored positive for codependency in at least five of the 8 categories to be labelled as codependent (Potter-Efron & Potter-Efron, 1989a). No psychometric data on the development of this instrument is available to date (R. Potter-Efron, personal communication, Oct. 1991).

The Individual Outlook Test (IOT)

The IOT is a 60 item test designed by Sim (1991) to measure codependency. Internal consistency, test-retest and validity estimates indicate that the IOT is a reliable, valid research and clinical instrument. It is the first instrument with these properties available for research and clinical purposes.

Descriptors culled from a review of the literature served as the basis of the items for the test, and the number of items allocated to each descriptor topic was determined by the frequency with which it was mentioned in the literature. An item-total correlation demonstrated that a parsimonious, valid version of 60 items could be constructed from the original 100 items. To ensure readability at a grade 8 educational level, a small group of grade 8 students were asked informally to review them. To avoid potential subject biases, the instrument was entitled the Individual Outlook Test (IOT) (Appendix A).

Content validity of the instrument was established by inclusion of content described in the literature and by submitting the items to a panel of three judges familiar with the concept of codependency. Discriminant validity was established through comparison of a group of clients diagnosed as codependent to a matched sub-sample of normals via the 60 item IOT. Inclusion criteria was that subjects be over the age of 18, and in the case of random contacts, be non-students. Clients were matched with a sub-sample from the norming group (n=107) for age, gender and socioeconomic status again using the Blishen scores (Blishen & McRoberts, 1976). A one-sample t-test showed that the sub-sample was representative of the total norming group (matched sample mean=156.0; norming mean=158.15; t=-.382; p=.7071). The codependent group scored significantly higher on the IOT than the matched sample from the norming group (codependent sample mean=179.83; t=2.277; p=.036). Sim (1991) concluded that these results were indicative of discriminant validity.

Reliability considerations included test-retest procedures and analysis for internal consistency using a sample of educational psychology graduate students. These students were administered a test-retest on the 60 IOT at a three to four-week interval with a resulting reliability correlation coefficient (Pearson Product Moment Correlation Coefficient) of r = .89. The response data for the graduate students and the random contacts was analyzed for internal consistency (Cronbach's Alpha Coefficient). The resultant correlation coefficient was r = .88.

CHAPTER 2

REVIEW OF THE LITERATURE

Introduction

No single, unified conceptual model of codependency currently exists, and it is only with difficulty that a coherent profile of the condition can be abstracted from the literature. Codependency has been variously considered a causal factor in the disease of alcoholism (Beattie, 1987; Powell, 1984; Cadogen, 1975; Edwards, Harvey & Whitehead, 1973; Corder, 1964; MacDonald, 1956; Lewis, 1954), a secondary, reactive symptom (Young, 1987; Rekers & Hipple, 1986), an addiction similar to chemical dependency in its processes and treatment goals (Wilson Schaef, 1986: Wegscheider, 1981; Peele & Brodsky, 1975), a personality disorder (American Psychiatric Association, 1987; Cermak, 1986a), and a disease process in its own right (Cermak, 1986a; Whitfield, 1984; Woititz, 1979; Burgin, 1976). Thus, an understanding of the complexity of measuring codependency requires a review of the conceptual development and models of codependency, as well as the etiology, and characteristics of the condition.

Conceptual Development of Codependency

The controversy surrounding the multiplicity of descriptors and etiology of codependency dictates that a review of the literature include a section on the conceptual development of the various models of codependency in existence. A review of the origins of the concept suggests that it is rooted in the disturbed-personality hypothesis (Harper & Capdevila, 1990). Early research efforts were intended to identify and minimize those behaviors which enabled the alcoholic to persist in his/her disease (Cermak, 1986a; Lewis, 1954). As chemical dependency began to be understood as a family disease (Subby, 1987; Gorski & Miller, 1984; Orford & Harwin, 1975), it was suggested that family members developed distinct dysfunctional traits and behaviors to cope with the addiction (Mendenhall, 1989a; Mendenhall, 1989b; Asher & Brissett, 1988; Bogdaniak & Piercy, 1987; Subby, 1987; Cermak, 1986a; Schaef, 1986; Rekers, & Hipple, 1986;

McConnell, 1986; Mapes, Johnson, & Sandler, 1985; Woititz, 1983 and Deutsch, 1983; Jackson, 1954). This perspective has largely been ignored in efforts to fit codependency into existing diagnostic categories (Harper & Capdevila, 1990).

Other dysfunctional systems have been identified (Arnold, 1990a; Sherman & Cardea, 1989; Whitfield, 1989; Subby, 1987; Schaeffer, 1987; Mulry, 1987; Wilson Schaef, 1986). Recently, the concept has been studied with the context of client-therapist (Covello, 1991; Carpenter, 1991; Shelley, 1991; Sherman & Cardea, 1989) and hospital-clinician dynamics (Arnold, 1990b), and has been applied to feminist, cultural (Sherman & Cardea, 1989) and socioeconomic issues (Brewer & Zawadski, 1990).

The term 'codependency' originally designated the spouse of the alcoholic, but has been generalized to "all family members and the chemical dependent's close social network" (Gierymski & Williams, 1986). The alcoholic family is still used as a paradigm for synthesizing information about codependency (Potter-Efron & Potter-Efron, 1989a), but the majority of research focuses on couples with CD problems and deals with a population comprised of chemically dependent males.(Steinglass, Bennet, Wolin & Reiss, 1987; West, Hosie & Zarski, 1987; O'Farrell & Cutter, 1984). In most cases, this research coalesces around the wife's relationship to, or effect on her husband's chemical use (Harper & Capdevila, 1990; Steinglass et al, 1987; West et al, 1987: O'Farrell & Cutter, 1984; Moos, Bromet, Tsu & Moos, 1979). Although male codependency is not uncommon, little research in this area exists and knowledge is "sketchy and inadequate" (Perodeau, 1984).

Conceptual Models of Codependency

Causal Implications

Early Al-Anon pamphlets introduced labels for wives of chemical dependents culled from the existing literature such as "Controlling Catherine", "Suffering Susan", "Wavering Winnie", "Punitive Polly" (Whelan, 1953), and "The Provocatrix" (Al-Anon, 1969) describing behaviors now known as characteristics of codependency (Wilson Schaef, 1986). The pamphlet includes the explanation that "a person must have the help of at least one other person to become an alcoholic...it cannot appear, get worse, or continue in isolation from others" (Al-Anon, 1969). The CD literature continues to perpetuate the myth that spouses sabotage recovery (Cadogen, 1975), and as recently as 1984, Powell voiced the concern that the spouse of the chemical dependent may refuse to allow him/her "to get well, create tension and a quarrelsome environment to strike back" at his/her progress.

Disease Model of Codependency

Alcoholism has long been accepted as a primary disease (Whitfield, 1984; Roebuck & Kessler, 1972; Fox, 1967). Many argue that the dynamics of codependency bear a striking similarity to the disease process in chemical dependency (Whitfield, 1989; Young, 1987; Wegscheider, 1979; Peele & Brodsky, 1975), and could lead to death (Whitfield, 1989; Wilson Schaef, 1986). It is a "mutual addiction" with the codependent "exhibiting the same increased tolerance and loss of control" in parallel stages with the chemical dependent (Capell-Sowder, 1984).

Personality Disorder Model

The disease concept of codependency has evolved into a more sophisticated theory of mental illness (Harper & Capdevila, 1990). Codependency has been described as most closely resembling the Dependent Personality Disorder (Coleman, 1987; Smalley & Coleman, 1987), but Cermak (1986a) rejects this framework as an oversimplification. Instead, a classification of Mixed Personality Disorder was suggested as more likely to encapsulate the variety of symptoms observed in codependents (Cermak, 1986a).

The personality disorder model has been generally criticized on the basis that the symptoms described in the literature are "so numerous and so diverse that it would require four separate DSM categories to contain it... as well as an additional category made up of 'associated features' " (Harper & Capdevila, 1990). Since personality disorders are thought to be less treatable than codependency (Cermak, 1986a) treating codependents on the basis of this framework may inadvertently perpetuate the pathology by inadequately addressing the issues specific to the condition (Cermak, 1986a; Cermak, 1986b; Wilson Schaef, 1986).

Dysfunctional Behavior Model

Proponents of this model begin to describe patterns of behavior as coping strategies, but conclude with a declaration of a disease entity, or personality disorder. In this vein, codependency has been variously described as a pattern of "maladaptive or problematic behaviors" indicating the presence of a "primary illness" (Whitfield, 1984), a coping strategy based on "obsession with the spouse" (Wegscheider-Cruse, 1985).and "with controlling other people's behavior" (Beattie, 1987), and compulsive repression of feelings

(Brown, 1985). Efforts to establish codependency as a coping strategy which progresses into a dysfunctional behavior pattern relieves the burden of guilt, but the declaration of personality disturbances or a disease process diffuse the focus (Harper & Capdevila, 1990).

Etiology of Codependency

Family Systems

Dysfunctional family dynamics

It is generally held that codependents have in common a family of origin in which unpredictability, inflexible rules and prohibitions against expression of feelings promote learned helplessness and undermine the process of identity development (Arnold, 1990a; Potter-Efron & Potter-Efron, 1989a; Whitfield, 1989; Mendenhall, 1989a; Smalley & Coleman, 1987; Subby, 1987; Wilson Schaef, 1986; Larsen, 1985; Deutsch, 1983; Black, 1982; Wegscheider, 1981). Dysfunctional family systems include those characterized by chemical dependency, emotional or psychological disturbances, and physical or sexual abuse (Young, 1990; Potter-Efron & Potter-Efron, 1989a; Subby, 1987; Larsen, 1985).

Alcoholic family dynamics

In order to survive in the alcoholic family system, its members develop complementary roles whose narrowness and consistency provide the stability that is otherwise lacking (Arnold, 1990a; Mendenhall, 1989b; Subby, 1987; Deutsch, 1983; Wegscheider, 1983; Smalley, 1982; Black, 1981; Wegscheider, 1979). Alcoholic families are too fragile and inflexible to permit children to experiment with different roles as they mature (Deutsch, 1983). Instead, early role behaviors amplify and become the fixed, self-defeating behaviors characteristic of adult codependents (Larsen, 1985; Wegscheider-Cruse, 1985; Deutsch, 1983). Codependent traits may also develop in adulthood as a response to addictive behaviors of a significant other (Arnold, 1990a; Mendenhall, 1989b; Deutsch, 1983).

Unconscious mechanisms

Ego defense mechanisms used to lessen the distress felt in family relationships fail to develop beyond the adolescent stage in some personality disorders (Horowitz, 1983) and in codependents (Cermak, 1986a). Energy is invested in the development of a role, or 'false self' (Friel, Subby, & Friel, 1984). However, the effects of a dysfunctional family are so strong that eventually, the false self predominates, even in the absence of the dysfunctional unit (Friel, Subby, and Friel, 1984). The result is a pathological condition which affects the individual in all other relationships (Wegscheider, 1985; Friel, Subby, and Friel, 1984).

Sociological derivatives

A more global perspective proposes that codependency originates from a combination of interpersonal and intrapsychic mechanisms (Cermak, 1986a) arising from an addictive process inherent in society (Wilson Schaef, 1986). This process stems from our social, cultural, political, educational, and religious heritage (Subby, 1987; Wilson Schaef, 1986), and is nourished by contemporary advertising (Fisher & Beer, 1990; Wilson Schaef, 1986; Peele & Brodsky, 1975), schools and religious institutions (Wilson Schaef, 1986), and even the health care system (Arnold, 1990b; Sherman & Cardea, 1989).

Symptomatology

Central Constructs

Codependents are generally described as individuals whose personal growth and ability to form healthy interpersonal relationships have been retarded by prolonged exposure to a dysfunctional environment (Sim, 1991; Arnold, 1990; Harper & Capdevila, 1990; Mendenhall, 1989a; Potter-Efron & Potter-Efron, 1989a; Beattie, 1987; Schaeffer, 1987; Smalley & Coleman, 1987; Subby, 1987; Wilson Schaef, 1986; Cermak, 1986a; Deutsch, 1983; Woititz, 1983). Their pathology appears to stem from the fear of being unable to prevent unacceptable or frightening events in their environment (Potter-Efron &

Potter-Efron, 1989a; Beattie, 1987; Schaeffer, 1987; Smalley & Coleman, 1987; Subby, 1987; Wilson Schaef, 1986; Cermak, 1986a).

The symptoms cited most frequently in the literature are: low self esteem, control issues, anxiety, excessive use of denial, hypervigilance, separation and abandonment issues, compulsive enmeshment in relationships with dysfunctional individuals, external referenting, compulsivity, constriction of emotions, recurrent physical or sexual abuse, substance abuse, and loss of morality (Sim, 1991; Arnold, 1990a; Mendenhall, 1989a; Zerwekh & Michaels, 1989; Potter-Efron & Potter-Efron, 1989a; Beattie, 1987; Subby, 1987; Coleman, 1987; Cermak, 1986b; Wilson Schaef, 1986; Norwood, 1985; Larsen, 1985; Deutsch, 1983; Black, 1981; Peele & Brodsky, 1975). It has been proposed that the presence of three (Cermak, 1986a) to five symptoms (Potter-Efron & Potter-Efron, 1989a) justifies a diagnosis of codependency. Collectively, these symptoms are seen as providing the basis for understanding the many facets of codependency and are the central constructs around which the IOT was created (Sim, 1991).

The literature also contains a number of miscellaneous characteristics which may be associated with codependency but which appear to be peripheral to the core issues of the condition. These include sadomasochism (Schaeffer, 1986), suicidal tendencies (Subby, 1987; Woititz, 1983), physical abusiveness (Mendenhall, 1989a; Beattie, 1987), sexual dysfunction (Beattie, 1987; Smalley & Coleman, 1987; Subby, 1987; McConnell, 1986), and a variety of mental illnesses (Beattie, 1987). Confusion, thinking disorders, and a variety of physical illnesses are also not uncommon (Wilson Schaef, 1986).

Characteristics

Denial

Denial may be seen as an impaired strategy for achieving security within relationships (Arnold, 1990; Potter-Efron & Potter-Efron, 1989a; Mendenhall, 1989a; Subby, 1987; Mapes, Johnson & Sandler, 1985; Black, 1981; Peele & Brodsky, 1975). Codependents use considerable psychic energy to monitor their environment and block any awareness that would lead to painful emotion (Schaeffer, 1987; Wilson Schaef, 1986). Denial maintains the belief that circumstances can be changed through sheer force of will (Cermak, 1986a). It is rarely acknowledged because personalizing failure offers hope that control can be re-established (Schaeffer, 1987; Cermak, 1986a). Thus, the breakdown of the denial system

is perceived to be a sign of personal inadequacy (Cermak, 1986a; Friel, Subby & Friel, 1984).

Control Issues

Codependents control to protect themselves from conflict and to avoid abandonment (Mendenhall, 1989b; Beattie, 1987; Subby, 1987; Schaeffer, 1987; Cermak, 1986; McConnell, 1986; Wilson Schaef, 1986; Woititz, 1983) . Because the codependent's self-worth depends upon the success or failure of significant others, their behavior must remain under the control of the codependent. Control appears in many subtle forms including helplessness, guilt, coercion, threats, manipulation (Beattie, 1987), perfectionism, hypervigilance, and depression (Cermak, 1986a).

Separation and Abandonment Issues

Codependents experience intense anxiety and boundary distortions when confronted with issues of intimacy and separation (Cermak, 1984). The codependent equates closeness with compliance, and intimacy with fusion (Cermak, 1986b; Wilson Schaef, 1986). As the relationship intensifies, the codependent internalizes the significant other's values, desires, and characteristics to the exclusion of their own (Subby, 1987; Friel, Subby & Friel, 1984). Gradually, they lose the ability to distinguish their own needs from those of the other person (Arnold, 1990a; Schaeffer, 1987). Increased interpersonal distance is viewed as a threat to the codependents' identity, and they become overwhelmed by fears of abandonment (Arnold, 1990a; Zerwekh & Michaels, 1989; Cermak, 1986a).

Codependents need to be needed and to this end, frequently promote dependence in others by making themselves indispensable (Wilson Schaef, 1986; Wegscheider, 1979). The anger and resentment of those who feel manipulated heightens the codependents' fear of abandonment, and strengthens their resolve to salvage the relationship (Zerwekh & Michaels, 1989; Wilson Schaef, 1986; Wegscheider-Cruse, 1985).

Because codependents have difficulty in preserving their identity when relating to others, some codependents compulsively avoid relationships with others in order to safeguard the integrity of the self and avoid abandonment (Zerwekh & Michaels, 1989; Cermak, 1986; Schaef, 1986a).

Enmeshment in Relationships with Dysfunctional Individuals

Low-functioning individuals are attracted to one another as a result of unconscious processes (Cermak, 1986a; Horowitz, 1983; Friel, Subby & Friel, 1984), and out of a need to recreate old, familiar patterns of relationships (Schaeffer, 1987). Individuals with immature defense mechanisms usually possess a narcissistic need to be considered special and have power over others (Horowitz, 1983). Thus, a complementary situation exists; one in which both partners can find mutual gratification without overtly expressing their needs (Horowitz, 1983).

Codependents need to have partners they view as weaker than themselves so that they can buoy their self-esteem by changing their partners' behavior (Schaeffer, 1987; Black, 1981), but when confronted with immature defenses in others, they respond instead by mirroring them (Friel, Subby & Friel, 1984; Cermak, 1986a; Wilson Schaef, 1986). Bonding is typified by a transference of dependency needs from the family of origin to a love relationship (Coleman, 1987; Smalley & Coleman, 1987; Rothberg, 1986; Norwood, 1985; Peele & Brodsky, 1975), enmeshment, fear of intimacy, and mutual self-deprivation (Wilson Schaef, 1986; Peele & Brodsky, 1975).

Low self-esteem creates a sense of obligation to stay in a relationship regardless of its health (Arnold, 1990a; Woititz, 1983). Cermak (1986a) suggests that remaining in a dysfunctional relationship for at least two years without seeking help is a strong indication of codependency (Cermak, 1986a).

Addiction to Relationships

Once activated, immature defense mechanisms provide the foundation for relationship addiction (Cermak, 1986a; Friel, Subby & Friel, 1984; Peele & Brodsky, 1975). Cermak (1986) and Peele (1975) suggest that codependents use relationships in the same way alcoholics use alcohol: preoccupation with the object of their addiction enables them to avoid unpleasant or painful aspects of their existence (Peele, 1987; Johnson, 1973). The codependent's lack of internal direction and sense of purpose creates the need for ritualized escape, and is exacerbated by exclusive involvement with the object of the addiction (Peele & Brodsky, 1975; Johnson, 1973). A dysfunctional relationship provides an artificial sense of purpose that reduces the motivation to engage in independent pursuits (Peele & Brodsky, 1975).

Codependents are seldom able to leave abusive relationships as they do not believe they have control over their own lives (Beattie, 1987; Subby, 1987; Cermak, 1986a). It has been suggested that, by remaining in these relationships, codependents have become accustomed to a chronic state of crisis through a process similar to that of addiction (Cermak, 1986b; Peele & Brodsky, 1975). Consequently, they become addicted to high levels of stress, and are as dependent upon their dysfunctional partners as their partners are on an addictive substance (Whitfield, 1989). Persistent patterns of self-defeating behaviors are then continually repeated without insight. Some codependents compulsively avoid relationships for fear of losing their identity within the relationship (Wilson Schaef, 1986; Cermak, 1986a).

External Referenting / Locus of Control

Codependents are characterized by an external locus of control, more often referred to as external referenting. Lack of emotional and/or behavioral independence and reliance on others to supply these needs (Beattie, 1987; Subby, 1987) leads to a reactive, rather than proactive approach to life (Mendenhall, 1989a). They have a constant need for approval and affirmation from others (Beattie, 1987; Subby, 1987; McCommell, 1986; Wilson Schaef, 1986), and as such need to feel indispensable to others (Beattie, 1987; Schaeffer, 1987; Subby, 1987).

Codependents tend to dismiss their own perceptions unless they are verified by others (Arnold, 1990a; Potter-Efron & Potter-Efron, 1989a; Subby, 1987; Cermak, 1986a; Wilson Schaef, 1986; Black, 1981). Since they have few established internal referents, codependents are dependent upon others to give them their sense of identity (Beattie, 1987; Smalley & Coleman, 1987; Subby, 1987; Wilson Schaef, 1986) and constantly require approval and affirmation from others (Arnold, 1990a; Zerwekh & Michaels, 1989; Wilson Schaef, 1986). Interpersonal relationships may be characterized by codependent collusion wherein each individual actively sustains the impression management of the other (Wilson Schaef, 1986). This results in boundary diffusion, and is considered a subtle form of control (Potter-Efron & Potter-Efron, 1989a; Cermak, 1986a).

Hypervigilance

Hypervigilance is characterized by extreme sensitivity to subtle shifts in the behavior and mood of significant others and is a means of coping with stress and unpredictability (Arnold, 1990a; Zerwekh & Michaels, 1989; Potter-Efron & Potter-Efron, 1989b;

Mendenhall, 1989b; Subby, 1987; Wilson Schaef, 1986). It is also a byproduct of investing self-esteem in another person's behavior (Cermak, 1986a). In order to control others' behavior, codependents must maintain constant vigilance (Subby, 1987; Cermak, 1986a). Because this requires a constant expenditure of energy, the codependent frequently alternates between episodes of apathy and frenzied efforts to maintain control (Wilson Schaef, 1986). This suggests a reactive, rather than proactive approach to life (Mendenhall, 1989a).

Affective Symptoms: Constriction of Emotions

Codependents avoid dealing with emotions (Arnold, 1990a; Zerwekh & Michaels, 1989; Smalley & Coleman, 1987; Cermak, 1986a; Wilson Schaef, 1986). They deny and distort feelings that they consider unacceptable or dangerous in order to be accepted and maintain an image of themselves as 'good' persons (Cermak, 1986a; Wilson Schaef, 1986; Black, 1981). This becomes a test of willpower: a way to prove that they are able to maintain control over their lives (Cermak, 1986a). As a result, codependents become progressively out of touch with their feelings.(Arnold, 1990a; Zerwekh & Michaels, 1989; Potter-Efron & Potter-Efron, 1989a; Mendenhall, 1989a; Friel, Subby & Friel, 1987; Cermak, 1986a; Wilson Schaef, 1986).

Codependents may also exhibit dramatic outbursts and compulsive exposure of feelings (Arnold, 1990a; Zerwekh & Michaels, 1989; Wilson Schaef, 1986). Repressed and distorted feelings build up over time. Any unpleasant emotions such as resentment, anger, and depression will resonate with a reservoir of similar feelings and their expression will be inappropriately intense (Subby, 1987; Wilson Schaef, 1986). The compulsive exposure of feelings and emotional constriction are largely unconscious processes and fulfill essentially the same purpose (Cermak, 1986a).

Low Self-Esteem

Low self-esteem often compels codependents to take care of dysfunctional partners (Arnold, 1990a; Zerwekh & Michaels, 1989; Subby, 1987; Wilson Schaef, 1986; Wegscheider-Cruse, 1985). They have a constant need for approval from others (Beattie, 1987; Subby, 1987; McCommell, 1986; Wilson Schaef, 1986), and frequently become caretakers to avoid rejection and abandonment (Subby, 1987; Wilson Schaef, 1986; Cermak, 1986a; Deutsch, 1983).

Since the codependent's self-worth is predicated on another's behavior, most healthy individuals avoid relationships with active codependents (Cermak, 1986a). Codependents necessarily have severely limited relationship options, and are often left with partners who are willing to accept the burden of their self-esteem, but are unable to sustain it (Cermak, 1986a). Because their partner fails to behave in appropriate ways, the codependent experiences a steadily growing sense of inadequacy and loss of control (Arnold, 1990a; Zerwekh & Michaels, 1989; Cermak, 1986a; Norwood, 1985). They do not know what is normal or abnormal and are unable to soothe themselves (Riley, 1991). Compulsive avoidance of relationships is also associated with feelings of inadequacy and chronic fearfulness (Cermak, 1986a; Norwood, 1985).

Loss of Morality

Codependents compromise their values in order to maintain relationships (Beattie, 1987; Cermak, 1986; Wilson Schaef, 1986). They may lie to protect their partner, or internalize the significant other's values, desires, and characteristics to the exclusion of their own (Subby, 1987; Friel, Subby & Friel, 1984). As they lose the ability to distinguish their own needs from those of the other person, (Arnold, 1990a; Schaeffer, 1987), they become increasingly tolerant of the inappropriate behavior of others (Mendenhall, 1989b).

The dishonesty inherent in codependents' intra- personal relationships is another form of a loss of personal morality (Beattie, 1987; Cermak, 1986; Wilson Schaef, 1986). The more enmeshed codependents become in the disease, the more pervasive and destructive the dishonesty and lying become (Wilson Schaef, 1986). They deny their problems to themselves and others to avoid painful emotions and rejection (Arnold, 1990a; Zerwekh & Michaels, 1989; Mendenhall, 1989b; Beattie, 1987; Schaeffer, 1987; Subby, 1987; Cermak, 1986; McConnell, 1986; Wilson Schaef, 1986; Woititz, 1983). Adolescent children of alcoholics may engage in promiscuity in an effort to be loved, and avoid dealing with painful issues, and often carry this behavior into adulthood (Deutsch, 1983).

Substance abuse

An overwhelmed denial system is the basis for turning to substance abuse (Cermak, 1986; Wilson Schaef, 1986). Because their lives lack fulfillment and are characterized by stress and unpredictability, some codependents turn to substance abuse to diffuse their

sense of disappointment, loneliness and resentment (Cermak, 1986a; Peele & Brodsky, 1975).

Codependents need excitement (McConnell, 1986), and in the absence of a crisis, they may turn to drugs or alcohol for immediate gratification (Subby, 1987; Beattie, 1987). Substance abuse also fulfills many of the same functions as relationship addiction (Arnold, 1990a; Zerwekh & Michaels, 1989; Subby, 1987; Peele, 1987; Johnson, 1973). The addiction is reinforced by a comforting sensation of well-being induced by the drug (Peele & Brodsky, 1975; Johnson, 1973). By the time codependents become addicted, they are driven to use the substance for psychological survival (Johnson, 1973).

Codependency may itself contain and create other addictions (Young, 1990; Whitfield, 1989; Mendenhall, 1989b; Rekers & Hipple, 1986) such as such as eating disorders, workaholism, and overspending (Beattie, 1987; Subby, 1987; Cermak, 1986b; Black, 1981). Indeed, Whitfield (1989) advises that "inside every alcoholic or other drug dependent person is a codependent".

Compulsivity

Compulsivity is a primary defense process permeated with denial (Mendenhall, 1989b; Subby, 1987; McConnell, 1986; Cermak, 1986a). Although codependents may experience periods of compulsive eating, spending, working, or compulsive relationships, the object of the compulsion is of secondary importance and often changes over time (Arnold, 1990a; Zerwekh & Michaels, 1989; Cermak, 1986a; Wilson Schaef; 1986; Peele & Brodsky, 1975). Since the codependent's identity is connected to controlling the compulsion, the struggle to resist the compulsion distracts attention from uncomfortable, unexpressed emotions, which usually have little to do with the compulsion (Arnold, 1990b; Zerwekh & Michaels, 1989; Wilson Schaef, 1986).

Depression

Typically, codependents view their depression as evidence of inadequacy and failure to stay in control, and for this reason they usually deny its presence (Arnold, 1990b; Zerwekh & Michaels, 1989; Subby, 1987; Cermak, 1986; Wilson Schaef, 1986). To acknowledge depression is to focus attention on their own feelings, and to admit that they have needs (Whitfield, 1989; Beattie, 1987; Subby, 1987; Cermak, 1986a; Wilson Schaef, 1986; Norwood, 1985). Depression may be expressed as a sense of emptiness,

and lack of purpose, and efforts to relieve it may take the form of compulsivity or addictive behaviors (Cermak, 1991).

For adult children of alcoholics, depression stems from deprivation (Wegscheider, 1983; Deutsch, 1983; Wegscheider, 1979). Early experiences have taught them that trust will not be reciprocated or respected (Gravitz & Bowden, 1985; Deutsch, 1983; Woititz, 1983). Thus, these children become isolated and depressed while their personalities are still forming. While isolation initially protects them from unstable bonds, the associated depression may become characterologic and normalized as the child matures (Wilson Schaef, 1986).

Anxiety

The anxiety of co-dependence can take a variety of forms (Whitfield, 1989; Wilson Schaef, 1986). Anxiety becomes chronic because of the high levels of denial codependents maintain to protect themselves from acknowledging and dealing with its source (Arnold, 1990; Zerwekh & Michaels, 1989; Potter-Efron & Potter-Efron, 1989a; Whitfield, 1989; Cermak, 1986a). When anxiety surfaces, it is misperceived as a sign of inadequacy and a state of free-floating anxiety is established (Arnold, 1990; Zerwekh & Michaels, 1989; Wilson Schaef, 1986).

Existential dread develops as the codependents gradually fuse their identity with that of a significant other, and become fearful about their very existence (Potter-Efron & Potter-Efron, 1989a: Subby, 1987; Wilson Schaef, 1986). Much of what codependents do in life is motivated by fear, and as their anxiety increases, they become confused, phobic and progressively more rigid in an effort to regain control (Potter-Efron & Potter-Efron, 1989a; Cermak, 1986a).

Recurrent physical or sexual abuse

Codependents view their experience from a distorted and self-reinforcing point of view and tend to minimize the amount of violence and the level of stress they experience (Subby, 1987; Cermak, 1986a; Wilson Schaef, 1986). They ascribe their circumstances to personal inadequacy, identify with their aggressors, and place their needs last (Subby, 1987; Cermak, 1986a; Wilson Schaef, 1986). Codependents are often unable to leave an abusive relationship (Young, 1990; Arnold, 1990b; Zerwekh & Michaels, 1989; Cermak, 1986a; Norwood, 1985), or tend to re-experience the trauma through obsessive thoughts and compulsive relationships with dysfunctional individuals (Young, 1990; Wegscheider,

1981; Deutsch, 1983). Addictive behaviors may serve to defend against memories of sexual abuse. Unidentified incest material may precipitate relapse (Young, 1990).

Physical Illnesses

Codependent behaviors temporarily offset chronically low self-esteem but eventually affect the individual physically (Whitfield, 1989). The need to control is one of the main causes of stress and physical illness in codependents (Arnold, 1990b; Zerwekh & Michaels, 1989; Whitfield, 1989; Cermak, 1986b; Wilson Schaef, 1986). Conditions that are either created or exacerbated by stress include headaches, asthma, hypertension, stroke, gastrointestinal problems, respiratory illnesses, rheumatoid arthritis, visual and hearing abnormalities, and even cancer (Mendenhall, 1989b; Beattie, 1987; Subby, 1987; Cermak, 1986a; McConnell, 1986; Wilson Schaef, 1986).

Construct Validation

Validity

Validity is a central issue for all scientific inquiry. Construct validity speaks to issues involving the theoretical constructs of the study. A construct is a theoretical concept to which a label (such as fear or rigidity) has been applied (Kielhofner, 1982), and which may explain the individual differences in the test scores on the same measurement tool (Kerlinger, 1973). Adequate validation processes assure that the link between the actual phenomena and the theories used to explain them are not distorted by a discontinuity between theoretical concept and its empirical referent (Kielhofner, 1982). The objective of validation procedures is to obtain measures which tap empirical phenomena that truly represent some proposed conceptual entity (Kielhofner, 1982). Thus, validation assures a link between theory and the phenomena that scientific inquiry attempts to describe or explain (Oyster, Hanten & Llorens, 1987; Kielhofner, 1982).

The inferences regarding specific uses of a test are validated, not the test itself (APA, 1985). The APA (1985) recommends that resources should be invested in obtaining the combination of evidence that "optimally reflects the value of a test for an intended purpose". Evidence regarding the psychological meaning of a construct is most often the central preliminary focus of instrument development and validation. Thus, comparison of the test to other instruments which purport to measure the same construct, and factor

analysis of the test scores are important first steps in construct validation (APA, 1985; Kerlinger, 1973)

Rigorous distinctions between the categories of validity are not possible. Evidence identified with discriminant or convergent validity is relevant also to the construct-related category (APA, 1985). However, rigorous study of convergent validity dictates that the theoretical underpinnings of the test have first been verified (APA, 1985; Andrews, 1974).

Construct validity focuses on the test score as a measure of the characteristic of interest (APA, 1985). The concern of this type of validity is with the clarity of definition of the constructs involved (Oyster, Hanten & Llorens, 1987). The APA (1985) suggests that constructs must be derived from some conceptual framework, "regardless of how imperfect that framework may be". While content validation strengthens the conceptual basis of the test and construct validity defines and interprets the constructs potentially involved in variations in test performance, both processes support the hypothesis that the test measures the construct of interest (APA, 1985). Multiple measures of a construct may not be possible since a variety of validated instruments may not exist in some areas of inquiry. However, substantial relationships of a test to other measures believed to measure the same construct support the identification of constructs (APA, 1985).

The process of construct validation is best described by Kerlinger (1973). He suggests that a researcher first identify a positive correlation between two measures, such as that between professionally identified codependents and those assessed using the IOT. To learn why this relation exists, the researcher must understand the meaning of the constructs by validating the theory behind the test. This process involves suggesting what constructs account for test performance, identifying hypotheses from the theoretical basis of the construct, and testing the hypotheses empirically. Testing for correlations between the test and other instruments believed to measure the same construct and examining intercorrelations among items should result in evidence supporting the assertion that a test measures a characteristic of interest.

Factor analysis

Factor analysis as a numerical model has been used in the behavioral sciences, and especially psychology and education for many years. This technique is one of the most powerful methods of construct validation, and has made many important contributions to the definition of human characteristics and abilities, as well as to how these abilities might be structured (Kerlinger, 1973b).

The techniques used in factor analysis have provided a basis for the development of many different forms of tests, questionnaires, and attitude scales. It is a method for determining the number and nature of the underlying variables among larger numbers of measures (Weiss, 1971). Factor analysis explores the interrelationships among variables to discover if some variables are actually reflections of a smaller number of underlying factors. It can be used to explore the data for patterns, confirm hypotheses, or reduce a large number of variables to a more manageable number (Norman & Streiner, 1986).

The process of factor analyzing a set of data may be thought of as beginning with the Pearson product moment correlation matrix. The basic assumption is that it may be possible to explain the correlations among two or more variables in terms of some underlying "factor". This is shown by "weighting" responses to questions on a test: the higher the weight, the closer that variable is associated with a given factor (Kerlinger, 1973b). Factor loadings express the correlations between the items and the factors. They range from -1.00 through 0 to +1.00 and are interpreted similarly to correlation coefficients (Kerlinger, 1973b).

In this study, factor analysis procedures are used to determine how each question "loads on a factor": in other words, to see how each question relates to the others in the test. Factor theory assumes that two items that measure the same thing will tend to be correlated, and that the extent of agreement between two items will indicate the extent to which the two tests are measuring the same thing (Hergenhahn, 1990). Some may cluster to measure relatively the same construct, and do not relate to other clusters (Andrews,1974; Bruning & Kintz, 1977; Andrews 1974; Weiss, 1971; Weiss, 1970). When a cluster of items showing high correlation with one another is observed, the items are considered to be measuring the same ability or characteristic (Hergenhahn, 1990). A characteristic discovered in this way is called a 'factor'.

Cattell's (1950) identification of source traits through factor analysis formed the basis of the development of a quantitative approach to personality assessment. In Cattell's theory, 'factor' is equivalent to the term 'trait'. Cattell used factor analysis as a method to discover traits, which he regarded as the building blocks of personality. Source traits are described by Cattell (1950) as the basic elements of personality which influence all of an individual's consistent behavior. Cattell (1950) believed that all individuals possess the same source traits but do so in varying degrees. For example, all people possess the factor 'Intellect' (Digman, 1990), but not all to the same degree (Cattell, 1950). The strength of this source trait in a given individual will influence many things about that person such as what he reads, or his openness to new ideas (Digman, 1990). Such outward behaviors are the manifestations of personality source traits which can be then measured by individual

items on a test. Factor analysis helps the investigator to identify groups of behaviors which may then be hypothesized to arise from a given personality trait (Hergenhahn, 1990; Cattell, 1950). Within the context of this study, the use of factor analysis is intended to contribute to the understanding of the components of codependency by objectively identifying its constituent parts. It was anticipated that the factor structure of the IOT would reflect the areas expected to characterize codependency as cited in the literature review.

Summary

Codependency is most often described as an important human disorder whose symptoms create profound physical and psychic suffering. In the literature review, various hypotheses for the etiology of codependency and fifteen of the most frequently described patterns of affect and behavior were described. The literature is rich in theory, but few attempts have been made to provide quantitative evidence to support the existence of codependency as a unique, diagnosable condition. Thus the conceptual, research and therapeutic value of codependency is limited. While this decreases clinical objectivity, it also hinders rigorous construct validation.

Despite the lack of congruency in this field, exploration of the constituent parts of codependency may provide the basis for a more coherent profile of the condition, aid in the interpretability of assessment and guide treatment. Since factor analysis is an important tool for reliability as well as validity, the results of this study may also guide future investigations, and suggest procedures for refinement of the IOT.

CHAPTER 3

METHODS AND PROCEDURES

Introduction

Sim's preliminary work (1991) formed the basis of this study. The central focus of this investigation was to continue the validation of the IOT. Only one psychometrically-derived instrument was available to measure codependency. Construct validation was thus confined to the comparison of the IOT to another instrument which appears to measure the same construct, but has little empirical evidence on which to base this assumption. However, in preliminary studies of construct validity, such initial evidence of theory validation is admissible (APA, 1985; Andrews, 1974).

Construct validation procedures were undertaken in two stages which consisted of comparison of the IOT to another index of codependency, the Codependency Questionnaire (CAQ) (Potter-Efron & Potter-Efron, 1989a), and factor analysis of responses to the IOT. Further evidence for discriminant validity was sought by comparison of mean scores on the IOT from a matched sample of normals and codependents. Demographic data were collected on a separate information sheet to describe the sample.

Although both the IOT and the CAQ are ordinal scales, interval statistics were used in this study as they were in the preliminary study by Sim (1991). Most variables in behavioral and educational research are nominal and ordinal, but if a linear relationship seems to exist between two variables, they probably do not depart too far from having the properties of interval scales. Because these statistical tools are more powerful, many ordinal variables can be treated as interval variables (Smith & Glass, 1987).

Objectives

Specific objectives for the study were to:

1. initiate construct validation of the IOT,
2. provide further evidence of discriminant validity, and
3. objectively identify the constituent parts of codependency.

Corresponding hypotheses were that: the IOT would correlate positively to an existing index of co-dependency, the CAQ, suggesting that both instruments were measuring the same construct; there would be a significant difference between mean scores of the codependent and the community data on the IOT, and finally; factor analysis of a sample of responses to the IOT would yield a small, number of interpretable factors. It was anticipated that the factor structure of the IOT would reflect the areas expected to characterize codependency cited in the literature.

Validation Procedures

Sampling Procedures for Comparison of the IOT and the CAQ

Two tests, the IOT and the Codependency Assessment questionnaire, believed to measure codependency were both administered to 18 clients from a psychoeducational group for codependents at the Alberta Alcohol and Drug Abuse Commission (AADAC) Downtown Treatment Center. This was essentially a non-probability sample of convenience. All subjects were over the age of 18 years. Identification of the sample was based on the characteristics of codependency observed in spouses of chemical dependents by AADAC personnel and cited in the literature (M. McKinley, personal interview, September,1991).

Originally, 30 persons were referred to the group. Twenty-three subjects registered and agreed to participate in the study. Of these, 19 attended the group on the day of testing, and one chose not to participate after reading the questionnaires. Demographic data including age, sex, marital status, and occupation was solicited. The sample was comprised of 17 females and one male. The age range was from 26 to 51 years with a mean age of 36 years. The average socioeconomic level was 48.0, with a standard deviation of 13.8, according to the Blishen Socio-Economic (SES) Scale (Blishen & McRoberts, 1976), a figure acceptably close to the figures (M = 51.63, S.D. = 11.0) for the City of Edmonton as reported by Elley (1961). The 1981 socioeconomic index for occupations in Canada is a composite of the prevailing income and education levels in each occupation and is based on 514 occupations reported in the 1976 Census (Blishen & McRoberts, 1976). Occupations are ranked from the lowest to the highest score (1 - 101) (Blishen & McRoberts, 1976).

Statistical Procedures for Comparison of the IOT and the CAQ and Discriminant Validity.

The Pearson Product Moment Correlation Coefficient was used to determine the association between the IOT and the CAQ. To provide further evidence of discriminant validity, t-tests of significance were used to determine whether there would be a significant difference between mean scores of the codependent and the community data on the IOT.

Sampling Procedures for Factor Analysis

Factor analysis was performed on a community sample of 275 subjects. The subject pool (n=275) was derived by combining community data from this and from Sim's (1991) study. To minimize the standard errors of the correlations when factoring variables such as items within a test, the minimum number of subjects for a reliable factor analysis is 200 (Cattell & Kline, 1977). The present sample exceeds the required sample size.

Non-probability, convenience sampling followed the procedures used in the initial development of the IOT. In Sim's study (1991) a sample of 107 individuals were selected from Edmonton, Calgary, Crooked Creek, Millet and Ponoka communities, educational psychology undergraduate classes at the University of Alberta, and a community college in Edmonton. This sample was extended in the present study to approximately 275 subjects from the Edmonton area and Calgary to obtain an adequate sample size for factor analysis (Cattell & Kline, 1977).

The sample was comprised of 170 females and 105 males. The age range was from 19 to 71 years with a mean age of 35 years (S.D. = 11.1). The Blishen SES Scale (Blishen & McRoberts, 1976) was used to assess socioeconomic level. The average socioeconomic level was 48.0, with a standard deviation of 13.9. This figure was judged to be acceptably close to the figures (M = 51.63, S.D. = 11.0) for the City of Edmonton as reported by Elley (1961).

Packages containing the IOT, an information sheet requesting participants' age, sex, marital status, and occupation, and a scoring sheet were distributed to subjects over the age of 18. These individuals were asked to complete the IOT according to the instructions contained within the package, and to distribute several packages to acquaintances. A sample size of 168 was derived from this procedure. The Edmonton sample was comprised of University of Alberta graduate students and secretarial staff and their non-student friends and relatives, and colleagues and acquaintances of the researcher from the

community. The Calgary sample included teachers associated with the Board of Education in Calgary, and their friends and relatives.

Statistical Procedures for Factor Analysis

First Order Factors.

In this study, factor analysis procedures were used for the exploration of data. Initially, first-order factors were extracted using principal components factor analysis (SPSS-X, 1988). Cattell (1966) suggests that since the principal factor solution extracts factors by size, the substantive factors will be extracted first and the smaller trivial factors will be removed later. In practical terms, when roots (eigenvalues) decrease dramatically in size, an additional factor adds relatively little to the information already extracted. Visual inspection of eigenvalues (Kaiser, 1958; Guttman, 1954) indicated the number of first order factors. Following the criteria suggested by Guttman (1954), all roots ≥ 1 were accepted as first order factors. This technique is known as the break-in-the-roots method (Gorsuch, 1983).

Experience suggests that this method used with test items rather than test variables, results in retention of too many factors. A smaller number must be chosen for rotation (Hunka, 1991). From the 19 factors indicated, a range of 5 to 7 factors were selected for rotation using the procedures described below.

Factor Extraction.

As there is little purpose to attempt an interpretation of unrotated factors (Hunka, 1991), the question of the 'correct' number of factors to be extracted from a correlation matrix arose. Firstly, two procedures were used to select the number of factors for rotation. Of these, one solution was selected for interpretation.

Although factor analysis procedures strive to find a limited number of factors that will contain the maximum amount of information (Gorsuch, 1983; Hergenhahn, 1973; Cattell & Jaspers, 1967), the procedures for selecting the number of factors to retain for rotation and then interpretation can vary considerably. These procedures range from formal statistical tests to informal procedures such as theory, or the experience of the researcher with a given domain of tests (Hunka, 1991).

There is no fully acceptable method which will guarantee that a correct number of factors will be selected. In fact, the correct number of factors is itself a subjective concept,

and the focus of much debate in the literature (Anderson, Acito, & Lee, 1982; Hakstian, Rogers, and Cattell, 1982; Zwick & Velicer, 1980; Lee & Comrey, 1979; Browne, 1968; Linn, 1968; Cattell & Jaspers, 1967). Several 'rules of thumb' guiding the choice of the upper and lower bounds for the number of factors are described in the literature. However, empirical investigations of these rules (Humphreys, 1964; Browne, 1968) have indicated both over- and underestimation of the number of factors. Therefore, selection of the number of factors should be based on more than one procedure (Rogers, T., Personal interview, 1992).

Usually, factor extraction is stopped after a large portion of the variance has been extracted and when the next factor would add only a very small percentage to the total variance extracted. The information which would be gained from an additional factor is reflected in the increased total variance accounted for when an additional factor is extracted (Gorsuch, 1983).

Cattell (1966) points out that a battery of variables is measuring a limited number of factors well and a larger number of trivial, specific, and error factors much less well. Therefore, the predominant factors account for most of the variance and are large, whereas the other factors are quite numerous but small (Cattell, 1966). In a practical sense, the addition of each factor means that another construct (factor) has to be envisaged to explain the data, and may not be worth the the increase in variance accounted for (Hunka, 1991). In this study, two commonly used methods based on this rationale were used. Both methods were consistent in identifying a limited range of factors.

In the first method, the total percentage of variance accounted for was visually inspected. The number of factors in this method is indicated by the size of the reduction in percent variance accounted for (Gorsuch, 1983). This criteria suggested five factors as a lower estimate of the 'correct' number of factors to be extracted.

Another frequently used method is to examine a plot of the value of each eigenvalue (vertical axis) against the ordered number (1st, 2nd, 3rd) of the roots. A selection of the number of factors is made at a point where there is a "break" in the size of the eigenvalue. This is sometimes referred to as the scree test. The term scree denotes the rubble at the bottom of a cliff (Cattell, 1966). Thus, in factor analysis terms, the first few roots show the cliff and the remainder show the 'rubble'. The scree plot illustrated in Figure 1 was examined to determine the number of factors accounting for nontrivial variance, and eliminate those accounting for such small portions of variance as to be of little value.

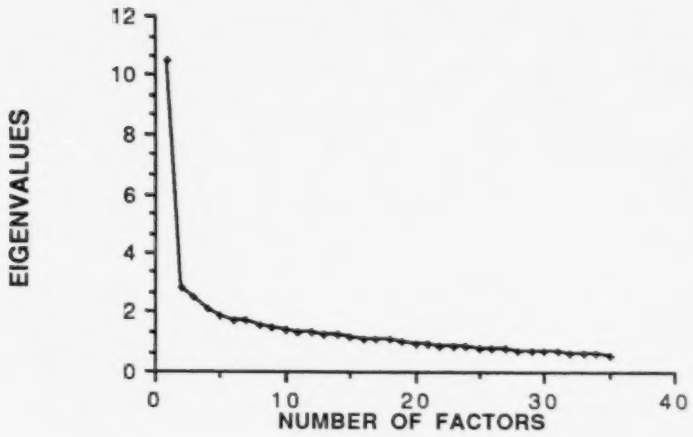

Figure 1. Scree Distribution

Cattell and Jaspers (1967) have suggested fitting a straight line to the point representing the smaller eigenvalues and noting where an upwards curve in the plot begins. The scree plot suggested 6 factors as an estimate of the number of factors to retain, since a break or rapid drop in the size of the roots occurs after the 6th root. Since it is thought that these methods may over- or underestimate the correct number of factors (Cattell & Jaspers, 1967), particularly with visual inspection (Gorsuch, 1983), it was decided to retain 5 to 7 factors for rotation. Following methods outlined by Blank (1980), the hypothesis testing procedure was used to ensure that a cut-off point of $r \geq .3$ was large enough to be statistically significant.

Selection of a Factor Solution.

Factors which, after rotation, cannot be interpreted regardless of any test for the number of factors, should not be retained (T. Rogers, personal interview, March, 1992). This suggests that the process of determining the number of factors is iterative where a range of factors may be selected for rotation and then a final selection of the number (the factor solution) based upon interpretability (Hunka, 1991; Gorsuch, 1983). For purposes of interpreting the meaning of a factor, it is preferable to have items with high loadings on one factor only. This is in fact, the goal of the rotation procedures (Hunka, 1991).

There are several factor analysis techniques commonly used for exploration of data. Each of these procedures, under various conditions, may give the best solution (Lee &

Comrey, 1978). In this study, three factor analyses, principal components, principal axis, and image analysis, were carried out and their results examined for interpretability. Convergence between the number of factors and interpretability was sought in each.

Based on both factor structure and interpretability, a five factor principal axis factor analysis with an oblimin (oblique) rotation was selected as the final solution.

Interpretation of the Five Factor Solution.

Naming of factors was based on the logico-deductive method, and on current codependency literature. The appropriateness of the designations was validated by submitting the factor loadings matrix to a panel of five judges familiar with codependence literature. They were asked to name each factor based on the corresponding item groupings. The final choice of factor designations incorporated suggestions from the panel of judges, as well as the current literature. These designations seemed to best represent the most salient emotional/behavioral features of each construct.

Collection of Demographic Data

Demographic data for all subjects was solicited in order to describe the sample, and included date of birth, gender, and occupation of subject and of subject's parents. Data for the Blishen SES Scale (Blishen & McRoberts, 1976) was collected to determine representativeness along socioeconomic lines. This data yielded a three-digit socioeconomic status number. The criteria employed to ascertain this number was identical to that used by Sim (1991). Where an individual listed occupational status present and historically as 'student', the parent's occupation was employed. For subjects 25 years of age and younger who listed their occupation as 'student', the parent's occupation was used as a more accurate reflection of longstanding socioeconomic status. In those situations where a subject was over the age of 25 and listed present occupational status as 'student' but had been employed prior to 'student' status, their occupational status prior to student status was used. Where the parent's occupation was used and both parents worked, the two Blishen scores were averaged. Subjects over the age of 25 who listed 'unemployed' under occupational status were assigned the parent's occupational status (Sim, 1991). Descriptive statistics were derived for the sex, age, marital status and socioeconomic status distribution of both samples.

Instruments

Administration Times and Conditions

Both the IOT and the CAQ are designed to measure patterns of behavior consistent with the characteristics of codependency cited in the literature. The 60 item IOT was administered to all subjects in the study, while the CAQ was administered only to AADAC clients. Because each area in the CAQ test is labeled with a heading reflecting the personality construct it is believed to measure, only the questions themselves were given to each subject. For administration to the codependent group, headings were deleted from the CAQ to avoid response sets and subject bias. All responses were marked on a computer scanning sheet.

Subjects selected from the community were asked to self-administer the test in a quiet area where they would be undisturbed for approximately 30 minutes. Subjects sought from AADAC were given both tests during the second regularly scheduled group therapy time at the treatment center. A five minute break between tests was given. All subjects were asked not to discuss the test or compare their responses. The tests were dubbed the IOT/60 and the PE/34 (Appendix B) to avoid potential subject biases and response sets.

Scoring Procedures

The IOT.

Subjects were asked to complete the IOT by placing their answers on a computerized scanning sheet. Responses were recorded on a five-point Likert-type scale on a separate scanning answer sheet. Weightings of 5, 4, 3, 2, and 1 from strongly agree to strongly disagree were used to score the IOT. The weighting for those items designed to avoid response set bias (items 2, 5, 12, 18, 28, and 46), were reversed at the time of scoring. These were accounted for at the time of data analysis and altered accordingly. A high score on the IOT thus reflects a codependent orientation. For purposes of factor interpretation, these items are read as having a meaning opposite to the one conveyed by the wording of the item.

The CAQ.

Scoring of the CAQ follows the procedure used with the IOT. For the purposes of this study, the scoring procedures used the 5-point Likert scale. This change was made at the request of ADAAC staff who felt that similar formats would be less confusing and stressful for their clients. This alteration in scoring is congruent with adaptations made by researchers who are currently using the CAQ in similar validation studies (R. Potter-Efron, personal communication, October, 1991). Since there is no available data regarding the reliability or validity of the CAQ, changes to the appearance or scoring protocol of this instrument cannot be said to measurably affect the validity of the original test.

CHAPTER 4

RESULTS

Introduction

Two separate validation procedures were conducted. One procedure involved a small sample (n = 18) of individuals identified as codependent by professionals at the Alberta Alcohol and Drug Abuse Commission (AADAC) Downtown Treatment Center. The other was a factor analytic study involving a much larger sample (n=275) from the Edmonton area.

Results from the codependent sample are reported first, followed by the results for the factor analytic study. Each factor identified by factor analysis was named based on the codependent characteristics it best describes. Items with factor loadings $r \leq .3$ were excluded from the final solution.

Construct Validation Results

Comparison of the CAQ and the IOT

The extent of agreement between the CAQ and the IOT (r=.89, $p \leq .05$) indicates that there is a strong positive and significant relationship between the two tests. This evidence supports the hypothesis that the IOT measures the construct of codependency.

Discriminant Validity

An independent t-test comparing means for the matched sample from the community group and for the codependent group was administered. Matching procedures were performed manually by the investigator who was blind to the IOT scores. Community data (n=170) was grouped according to sex, age and SES. Subjects (n=18) were then selected from these groups by matching to the codependent data first for sex and age and lastly for

SES. It is shown in Table 1 that the codependent group's mean scores on the IOT were found to be significantly higher than the community sample.

Table 1
Comparison of Mean Scores of the Codependent and Matched Community Data

Variable	N	Mean	SD	STD Error	T Value	Degrees of Freedom	2-Tail Prob
IOT Codependent	18	190.3	41.8	9.8	- 4.3	17	0.001
Matched	18	156.3	27.6	6.5			

To determine the representativeness of the matched community sample (n=18) with the total community group (n=170), a single sample t-test was administered comparing the two means (Table 2). Significance was set at $p \leq .05$. The matched sample was not significantly different from the community group on IOT scores ($p = .868$), the Blishen Socio-Economic (SES) Scale ($p = .189$), or age ($p = .121$), and may therefore be assumed to be representative of it.

Table 2
Comparison of Mean Scores of the Total Community Data and the Matched Sample

Variable	N	Mean	SD	STD Error	T Value	Degrees of Freedom	2-Tail Prob
IOT Community	150	157.6	32.3	2.6	0.19	22.96	0.85
Matched	18	156.2	27.6	6.5			

Factor Analysis Results

Several factor analyses techniques were used and their results examined for interpretability. Initially, the Kaiser-Guttman method (Hunka, 1991) for determining upper

and lower bounds for the number of factors indicated nineteen unrotated factors. These factors accounted for 64% of the variance.

Based on the factor structure and the meaningfulness of the item groupings, the five factor principal axis solution with an oblimin (oblique) rotation proved to be the most interpretable. This solution accounted for approximately 27% of the variance. The factor structure is illustrated in Appendix C. Fourteen items were eliminated by factor analysis procedures. This indicates that these items did not contribute significantly to the test as a whole. This reduced the number of variables from 60 to 46 test items. Items eliminated by factor analysis appear in Appendix D.

Factor designations.

Based on suggestions from a panel of five judges familiar with codependency literature and factor analysis techniques, the five factors were named as follows: I. Self Esteem / External Referenting; II. Dysfunctional Relationships / External Locus of Control; III. Dependency within Relationships; IV. Dysfunctional Family of Origin; and V. Anxiety (Appendix E). Agreement was high among all five judges as to the constructs represented by the item groupings.

General comments from the panel of judges were incorporated in the following descriptions of the factors. Factor I, Self Esteem / External Referenting was so named because the configuration of items suggested an emphasis on an externally derived sense of self-worth. It was thought that low self-esteem was the result of reliance on others for self-definition and validation, particularly in the case of partnerships where one member is an alcoholic. Factor I was the most substantial factor, accounting for 17.5% of the variance.

The second factor, Dysfunctional Relationships / External Locus of Control, accounting for 4.7% of the variance, seemed to describe a pattern of relationships in which an individual (knowingly or otherwise) is manipulated into guilt-inducing behaviors to protect a significant other. Negative affect such as shame or guilt is the result of actions which compromise an individual's values, and which are performed for the sake of another (Cermak, 1986a; Norwood, 1985; Horowitz, 1983). In this case, the emphasis is on behaviors which appear to be under the control of forces, such as expectations of others, which are external to the self.

Factor III, Dependency within Relationships accounted for 4.2% of the variance. The pattern of items loading on this factor was suggestive of self-definition through a relationship. This was strongly reminiscent of relationship addiction and boundary

diffusion as described by Cermak (1986) and Peele (1975), who suggest that dependency on a significant other is created by a lack of internal direction and sense of self. External referenting seems indicated by the need fill this void by exclusive involvement with a significant other (Peele & Brodsky, 1975; Johnson, 1973).

The items in Factor IV, Dysfunctional Family of Origin, seem to probe an abusive and/or unhappy childhood. Item 2, interpreted as 'I try to help people whether or not I'm asked', does not appear to be related to the others in this factor. It may be related to issues concerning emotional and interpersonal development, and thus may reflect some aspects of etiology. The chemical dependency literature abounds with descriptions of the role of the 'perfect' child, who copes with a dysfunctional family by anticipating the needs of others (Subby, 1987; Wilson Schaef, 1986; Larsen, 1985; Deutsch, 1983; Black, 1982; Wegscheider, 1981). In these families, there is often an expectation that members should just "know" what to do (Riley, 1991). Riley (1991) describes compulsive caretaking behaviors as part of a defensive style which is used to handle anxiety by anticipating and controlling others. Factor IV accounted for 3.5 percent of the variance.

Factor V, Anxiety, accounted for 3.1% of the variance. Corresponding items seemed to indicate a state of generalized anxiety over which the individual has little control. A sense of despair, which seemed to be related to locus of control issues, was inherent in this cluster of items.

Summary of Results

Evidence of construct validity was demonstrated by a positive and significant correlation between the IOT and another indices of codependency. Evidence to support discriminant validity was also provided.

Several factor analysis techniques were used and their results examined for interpretability. The principal axis factor analysis with an oblique rotation met the two criteria of maximum interpretability and parsimony in terms of the fewest shared factor loadings. Factors were interpreted and given appropriate designations, as validated by a panel of five expert judges. Comments and suggestions from the panel were included in the description of each factor and substantiated, where appropriate, by the relevant literature. Fourteen items were eliminated by factor analysis procedures, thus shortening the IOT to 46 from an original 60 items.

CHAPTER 5

DISCUSSION

Discussion of Results and Limitations

The codependency scale described in this research provided a number of promising findings. Although the limitations of this study give rise to some reservations about the immediate acceptance of the instrument, both phases of this study demonstrated that the IOT has strong clinical and research potential.

The IOT was found to correlate highly with another instrument believed to measure codependency, and showed evidence of discriminant validity. The high correlation between the two instruments may have been influenced by the small sample size, and to a lesser extent, by social desirability factors which the literature suggests codependents are particularly prone to. Although one would expect a low correlation as a result of the homogeneity of the sample, examination of the range of scores in the raw data suggested that within the group itself, there was a high variability. This is suggestive of within-group heterogeneity which may have positively influenced the size of the correlation.

Correlation between the two instruments is not evidence that the CAQ and the IOT are equally reliable and valid, and should not be interpreted as such. It should also be noted that the characteristics of codependents in this sample may only be representative of codependents who are in treatment and who have been in relationships with alcoholics. Thus, the results from this phase of the study are generalizable only to groups similar to the one used in this study. Notwithstanding these considerations, the results strongly suggest that the two tests measure the same construct. Since their development was based on close attention to the current codependent literature, it may be further assumed that both measure the condition of interest.

Principal axis factor analysis provided further evidence for content and construct validity, and indicated five factors underlying the test. These corresponded to five main characteristics of codependency. Although the scales appear to be distinct from one another in terms of the central feature being measured, there seemed to be one underlying dimension common to each factor. This dimension was inherent in most IOT items and appeared to have two components. One component, labeled external referenting, was used to reflect the sense that the self was defined and validated through external sources, and that

personal resources were dependent upon external factors. External locus of control, on the other hand, referred to behaviors that appeared to be controlled by others

Although these results suggest that the IOT could be divided into five separate scales measuring the main characteristics of codependency, some questions may arise in view of the finding that a large percentage of the overall variability of the data is accounted for by unique factors. In other words, much of the variability of the data appears to be accounted for by factors that are unrelated to the five identified (T. Rogers, personal interview, March, 1992). This seems to suggest that some of the constituent parts of codependency are not probed by the IOT.

The amount of overall variability may have been reduced as a result of several factors. In the sample used for factor analysis procedures, the questions may not have been highly related to each other. The inter-item correlations were generally low ($\approx .3$) suggesting that most people may have chosen neutral rather than strong responses to the test items, thereby reducing variability. This result is not surprising, since items designed to probe pathological patterns would not elicit as strong responses in the normal population as in a clinical population. Experience suggests that variance unaccounted for is of little practical concern, provided that the factors themselves are interpretable and sensible, and the items load cleanly on each factor (T. Rogers, personal interview, March, 1992).

Clinical implications.

The IOT was found to have a strong positive relationship with the CAQ ($r = .89, p \leq .05$). Notwithstanding the limitations of the study, the results strongly suggest that the two tests measure codependency. Particularly in light of previous claims to various forms of validity and reliability, as well as additional evidence presented in this study, it may be assumed that when used in combination with clinical judgement, high scores on the IOT reflect a codependent orientation.

Factor analysis provided further evidence for content and construct validity, and indicated five factors underlying the test. These factors were consistent with the characteristics most often associated with codependency.

Factor analysis confirmed expected patterns, and reduced the number of variables from 60 to 46 test items. The results from this phase of the study indicate that a cohesive profile of codependency within a limited range of factors is inherent in the instrument. This suggests that codependency may be defined by a considerably smaller range of characteristics than those described in the literature (Wilson Schaef, 1986), a finding which has several important clinical implications.

Assessment and interpretation of results could be expedited by dividing the shortened version of the IOT into subscales. These scales could guide the process of diagnosis and treatment by providing a coherent suprastructure under which symptoms could be organized. This should aid in both the administration and interpretation of data.

The designations chosen for the five factors identified by this study reflect a reactive stance towards the self, the environment and within the context of interpersonal relationships. These findings suggested a preliminary definition of codependency as a persistent, self-defeating pattern of intra- and interpersonal relationships characterized by poor self-worth, dependency, disturbed emotional development, and anxiety, and driven by an extreme external locus of control. This definition is supported by current codependency literature which links an underlying locus of control to a reactive, rather than proactive interpersonal style (Mendenhall, 1989a). A clear, empirically based definition of codependency could enhance communication among theorists and clinicians and could also be used psychoeducationally in patient care. It remains for future research to determine the durability and salience of the five factors proposed by this study.

Clinical implications for occupational therapy.

Identification of the five subscales inherent in the IOT could assist occupational therapists in organizing the symptoms associated with codependency into a frame of reference consistent with the scope of occupational therapy practice. The characteristics attributed to codependents include: vesting their self-identity in others; making themselves indispensable in a martyr-like manner; being unaware of their feelings and dependent on others to define their feelings; not trusting their own perceptions; attempting to control others; being dishonest; experiencing excessive anxiety; and suffering from depression and various physical illnesses (Wilson Schaef, 1986; Beattie, 1987). These have been shown to have very disruptive effects on an individual's professional and personal functioning (Williams, Leclair & Sullivan, 1991; Hall & Wray, 1989). The five IOT subscales could be used to indicate those areas most urgently requiring attention in the codependent client. A higher score on one of the scales could alert the therapist to issues or patterns of behaviors having the most detrimental effect on activities of daily living and quality of life.

The practice of occupational therapy is concerned with deficits in occupational performance related to independent living and quality of life. Occupational performance refers to three main areas: self-care, productivity, and leisure (Madill & Britnell, 1989). While these areas of daily living may be more visibly affected in alcoholic clients,

knowledge of potential areas of dysfunction present in their partners could assist the occupational therapist to more effectively incorporate them in the treatment plan.

Each of the five factors indicates potential problem areas which could affect the three areas of occupational performance. Self-care, productivity and leisure activities could be undermined by low self esteem and the presence of dysfunctional relationships, which are both closely linked in the literature to external referenting and locus of control. Low self esteem is believed to be the result of investing one's self esteem in the behavior of a dysfunctional partner who is incapable of nurturing it (Cermak, 1986a; Wilson Schaef, 1986). The failure of the partner to sustain the self esteem of the codependent often results in depression and lethargy (Whitfield, 1989). The codependent continues to invest energy in monitoring and controlling their partners' inappropriate behavior to avoid the the shame they feel when protecting their partners from the consequences of their behavior (Potter-Efron & Potter-Efron, 1989a; Whitfield, 1989; Cermak, 1986b). Thus, little energy remains to devote to self-care activities, or the pursuit of independent leisure or occupational interests.

The items correlated with Dependency in Relationships seem to describe an individual whose scope of activity and sense of self-identity is limited to activities involving a significant other. A sense of self-identity and mastery seems to be derived through successful vigilance over the significant other. The literature suggests that the activities required to maintain the sense of control gained from this dependency may divest the codependent of sufficient energy to perform basic activities of self-care (Whitfield, 1989; Cermak, 1986b; Wilson Schaef, 1986). Peele and Brodsky (1975) suggest that such individuals are so preoccupied with the object of their dependency, that they may give up all independent leisure or career pursuits.

Deficits in occupational performance may also be linked to behaviors and attitudes about the self and others learned in the family of origin (Wegscheider, 1983). These are linked to chronic anxiety, depression, external locus of control, and dependency on dysfunctional relationships (Cermak, 1986a; Wegscheider, 1983). Whitfield (1989) suggests that these symptoms result in poor eating and sleeping habits, loss of energy and motivation for leisure and occupational activities, and ultimately in serious physical illnesses. Factor IV, Dysfunctional Family of Origin may suggest the need to investigate the possibility of child abuse, or chemical dependency in the clients history.

Anxiety may limit an individual's capacity to function effectively in cognitive and behavioral realms, particularly if, as Factor V suggests, the anxiety seems linked to despair. The items correlated with this factor suggest that the anxiety stems from unspecified sources, and seem to describe an individual who is overwhelmed and

prevented from acting on his or her environment. Chronic states of anxiety are related to a variety of physical and emotional disorders which disrupt occupational performance and diminish quality of life (Whitfield, 1989; Cermak, 1986b).

The IOT could assist the occupational therapist to quickly identify and treat deficits in occupational performance as described within the five subscales. Therapy could then be directed towards enhancing self-esteem, achieving a balanced routine including leisure activities designed to enhance self-image, and improving quality of life by increasing the clients sense of personal efficacy and mastery in his/her environment.

Implications for Future Research

The possibility of a general codependency factor could be further explored in future factor analytic studies. This could be accomplished by holding one factor constant and rotating the remaining factors. Since some information from the general factor may have been lost through the rotation procedures, this procedure might increase the amount of variance explained.

The reduction of items seems to suggest that some irrelevant items were included in the IOT during test development. Future research might include further factor analysis procedures to investigate the factor structure after items eliminated by procedures in this study have been removed from the test. Methods for deleting additional items could also be explored. For example, an item analysis could determine which items contributed least to the test. These could be altered or replaced with more relevant items as suggested by the literature, and factor analysis procedures again repeated. This could effect an increase in the total variance accounted for by the factors.

Since there is reason to believe that the sample used in this study may have influenced the variability within the test, future studies might include examination of response frequencies, and a factor analysis of IOT results using a codependent population to compare the response behaviors of the population used in this study. Finally, the sample size could be increased and confirmatory factor analysis used to provide evidence of the stability of the factor structure.

Concurrent administration of the IOT and tests of self-esteem, locus of control, and anxiety, could provide further evidence for the underlying codependency traits identified in this study or may suggest alternative designations than those chosen. Should the IOT be divided into subscales based on the results from this study, each subscale should undergo reliability testing and further validation procedures to substantiate conclusions based on these scales and on the total scores.

Other foci of research include establishing divergent validity to reduce the possibility that the IOT is measuring English language abilities or intelligence. Establishment of cross-cultural norms would enhance comparisons within and between groups.

Lastly, factor analysis identified family of origin issues as one of the predominant characteristics of codependency. The literature suggests that the etiology of this condition is not limited to the CD population (Beattie, 1987; Subby, 1987; Cermak, 1986a; Norwood, 1985; Black, 1981). Future research should investigate other dysfunctional family systems thought to generate conditions conducive to the development of codependency, such as physical and sexual abuse, and chronic family illness (Beattie, 1987; Subby, 1987; Norwood, 1985; Black, 1981). Interventions could thus be modified to meet individual needs, or be applied preventatively.

Conclusions

It has been shown that the IOT possesses construct validity. A strong, positive correlation with another indices of codependency indicates that the IOT does measure the condition of interest. Additional evidence for discriminant validity was also presented.

Several factor analyses were used and their results examined for interpretability. These procedures supported content and construct validity by demonstrating that the IOT probes aspects of characteristics common to codependency. The principal axis factor analysis with an oblique rotation met the two criteria of maximum interpretability and parsimony in terms of the fewest shared factor loadings, and produced a psychologically meaningful factorial interpretation of codependent symptoms. The five factors or traits underlying the test are congruent with codependency literature, suggesting that the IOT could be divided into five subscales each measuring one of the constituent parts of codependency. A preliminary definition of codependency was proposed based on the traits identified in this study. It remains for future research to determine if these characteristics are the most salient ones to this condition.

Several concerns were discussed regarding the generalizability of the results as a result of the small size of the codependent sample used, as well as the choice of a normal population for factor analyses. Notwithstanding, the results of this study demonstrated that the IOT possesses content, discriminant and construct validity. Although the development of the IOT is yet in its infancy, and it is being used in an area that is notoriously difficult to measure, numerous avenues for future research exist.

While work remains to be done, the IOT promises to become a sophisticated and useful measure in both clinical and research domains. Particularly in light of previous claims to

various forms of validity and reliability, as well as evidence presented in this study, it may be assumed that when used in combination with clinical judgement, high scores on the IOT reflect a codependent orientation.

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Appendix A

The 60 Item Individual Outlook Test (IOT)

1. I sometimes feel that I'm not good enough to associate with the people I meet.
2. I never try to help people unless I'm asked.
3. I have often done things without thinking them through properly and later regretted my decision.
4. I feel anxious or tense about something or someone almost all the time.
5. I had a happier childhood than most other people.
6. I have had partners who didn't treat me very well.
7. It seems to me I have spent my whole life trying to please others.
8. Although I appear strong and capable to others, there is a part of me that isn't strong at all.
9. I have been close to people who did illegal things and I found excuses for what they did.
10. Often when asked for my opinion, I find out what other people think before I say what I think.
11. I often feel there is something bad about me.
12. I am not ashamed of my childhood.
13. I can't remember the last time I felt totally carefree and relaxed.
14. Sometimes I don't know who the real me is.
15. I have on many occasions, checked up to see where my partner is when he or she is not with me.
16. I tend to believe things people say and often find out later that they have lied.
17. I have trouble thinking of the right things to say when in a group of people.
18. I feel I fit in at most social gatherings.
19. I feel best about myself when I'm having a romantic relationship.
20. Often, others find things amusing that I don't consider funny.
21. Even a small kindness from a person I've had a problem with makes me forgive and forget.
22. I don't undertake any project unless I'm pretty sure I'll succeed.
23. There are thing I have done or had happen to me in the past that I am ashamed to talk about.
24. I have often said hurtful things to people I love in order to get them to listen.
25. I am embarrassed when people give me compliments but secretly I feel good.

26. I can be easily swayed from doing something if others criticize it.
27. When things go wrong for others, I often blame myself even when I shouldn't.
28. I don't worry very much about what the future holds for me.
29. When I am in a relationship, I am totally involved in it and expect the same from my partner.
30. Quite often I lose sleep worrying about people who are important to em.
31. I quite often feel as if something dreadful is going to happen.
32. When I feel I have insulted a person, I feel ill until I make the matter right.
33. I sell myself short and settle for less than the best in romantic partners.
34. I have lied to protect people who are important to me.
35. I was raised in a family where physical abuse occurred.
36. I need a lot of reassurance that people like me.
37. It is hard for me to ask for help from someone unless I know I can return the favor.
38. When even little things go wrong, I usually get very upset and stay upset until everything is fine again.
39. Often I feel so nervous and tense that I feel dizzy.
40. I rarely go out or do anything without my partner.
41. I am envious of most of the people I meet.
42. If I am embarrassed or feel foolish, I worry about it for days.
43. Some days there seem to be so many things going wrong that life seems hopeless.
44. Sometimes I have so many thoughts racing through my head that I can't make sense out of them.
45. When I meet someone who has a problem, I often try to help them even before they ask.
46. I am never concerned about whether people like me or not.
47. I have often gone to see a doctor about my depression.
48. I don't let people get to know the real me.
49. There have been times when my life has seemed so depressing that I have thought of ending it.
50. As a child, my parents seldom listened to what I had to say or how I felt.
51. I do not like people criticizing me even if they may be right.
52. When I am alone, I often feel desperate to have company.
53. Most people cannot be truly trusted.
54. It bothers me if my romantic partner wants to go out or do something without me.
55. If someone criticizes me, I tend to believe them and then try to change myself.
56. My feelings and behavior are mostly controlled by the people around me.

57. One of my greatest worries is that some of the people I care about may leave me.
58. I have done things I am not very proud of in order to keep a relationship together.
59. I often feel as if I haven't begun to live yet.
60. I often feel anxious and uptight and can't figure out why.

Appendix B

PE/34 (CAQ)

1. Do you become preoccupied with the problems of others, especially those of the user?
2. Do you try to "keep things under control" or "keep a handle" on situations?
3. Do you take more than your fair share of responsibility for tasks that have to be done?
4. Are you afraid to approach others directly, in particular the user?
5. Do you often have anxious feelings or worry about what will happen next?
6. Do you avoid taking risks with others because it is hard for you to trust?
7. Do you often feel ashamed not only about your behavior, but also about the behavior of others, especially the user?
8. Do you feel guilty about the problems of others in your family?
9. Do you withdraw from social contact when you are feeling upset?
10. Do you sometimes hate yourself?
11. Do you ever cover up bad feelings about yourself by acting too confidently?
12. Do you often feel hopeless about changing the current situation?
13. Do you tend to be pessimistic about the world in general?
14. Do you have a sense of low self-worth or failure that does not reflect your skills and accomplishments?
15. Do you feel persistently angry with the user, other family members, or yourself?
16. Are you afraid of losing control if you let yourself get really mad?
17. Are you angry at God?
18. Do you ever get back at others in sneaky ways, perhaps without being fully aware of this behavior at the time?
19. Do you feel yourself denying the basic problems in your family?
20. Do you tell yourself that these problems are not *that* bad?
21. Do you find reasons to justify the irresponsible behavior of others in your family?
22. Do you tend to thing in either/or terms when there are problems, instead of looking at many alternatives?
23. Do you feel troubled if anyone upsets your usual routines?
24. Do you tend to see moral issues in black-and-white terms?
25. Do you "get stuck" in certain feelings such as guilt, love or anger?
26. Do you have trouble asking for what you want and need?
27. Do you feel pain right along with another person who is in pain?
28. Do you need to have another person around in order for you to feel worthwhile?

29. Do you worry a great amount about how others perceive you?
30. Do you wonder what it means to be "normal"?
31. Do you sometimes think that you must be "crazy"?
32. Do you find it difficult at times to identify what you are feeling?
33. Do you have tendency to be taken in by others - to be gullible?
34. Do you have a hard time making up your mind - are you indecisive?

Appendix C

Factor Structure of Principal Axis Analysis

OBLIMIN ROTATION 1 FOR EXTRACTION 1 IN ANALYSIS 1 - KAISER NORMALIZATION.

PATTERN MATRIX:

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5
ITEM36	.62153				
ITEM26	.53848				
ITEM42	.52906				
ITEM55	.47819				
ITEM46	.42018				
ITEM56	.40013				
ITEM17	.39826				
ITEM10	.39047			-.31712	
ITEM51	.37921				
ITEM1	.36484				
ITEM59	.35238				
ITEM37	.33605				
ITEM14	.31637				
ITEM8	.31502				
ITEM21					
ITEM52					
ITEM23		-.46897			
ITEM49		-.46532			
ITEM58		-.46274			
ITEM9		-.44200			
ITEM6		-.42240			
ITEM48		-.35779			
ITEM34		-.35559			
ITEM3		-.34031			
ITEM33					
ITEM40			.51990		
ITEM29			.43870		
ITEM15			.43505		
ITEM24			.40574		
ITEM19			.38912		
ITEM54			.38142		
ITEM20			.35267		
ITEM16			.34466		
ITEM22					
ITEM32					
ITEM25					
ITEM53					

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5
ITEM35				-.52712	
ITEM12				-.45225	-.30339
ITEM5				-.37909	
ITEM2				.31638	
ITEM11					
ITEM18					
ITEM50					
ITEM45					
ITEM31					-.61877
ITEM60					-.53747
ITEM39					-.52951
ITEM7					-.49513
ITEM4					-.47193
ITEM30			.43810		-.45227
ITEM41					-.41954
ITEM44					-.39559
ITEM27					-.38032
ITEM38	.35014				-.36139
ITEM43					-.33446
ITEM47				-.31299	-.32556
ITEM28					
ITEM13					
ITEM57					

Appendix D:

Items Eliminated by Factor Analysis

21 Even a small kindness from a person I've had a problem with makes me forgive and forget

52 When I am alone, I often feel desperate to have company

33 I sell myself short and settle for less than the best in romantic partners

22 I don't undertake any project unless I'm pretty sure I'll succeed

32 When I feel I have insulted a person, I feel ill until I make the matter right

25 I am embarrassed when people give me compliments but secretly I feel good

53 Most people cannot be truly trusted

11 I often feel there is something bad about me

18 I feel I fit in at most social gatherings

50 As a child, my parents seldom listened to what I had to say or how I felt

45 When I meet someone who has a problem, I often try to help them even before they ask

28 I don't worry very much about what the future holds for me

13 I can't remember the last time I felt totally carefree and relaxed

57 One of my greatest worries is that some of the people I care about may leave me

Appendix E

Five Factor Principal Axis Analysis

Factor I: Self-Worth / External Referenting

36 I need a lot of reassurance that people like me
26 I can be easily swayed from doing something if others criticize it
42 If I am embarrassed or feel foolish, I worry about it for days
55 If someone criticizes me, I tend to believe them and then try to change myself
46 I am never concerned about whether people like me or not
56 My feelings and behavior are mostly controlled by the people around me
17 I have trouble thinking of the right things to say when in a group of people
10 Often when asked for my opinion, I find out what other people think before I say what I think
51 I do not like people criticizing me even if they may be right
1 I sometimes feel that I'm not good enough to associate with the people I meet
59 I often feel as though I haven't begun to live yet
37 It is hard for me to ask for help from someone unless I know I can return the favor
14 Sometimes I don't know who the real me is
8 Although I appear strong and capable to others, there is a part of me that isn't strong at all

Factor II: Dysfunctional Relationships / External Locus of Control

23 There are things I have done or had happen to me in the past that I am ashamed to talk about
49 There have been times when my life has seemed so depressing that I have thought of ending it
58 I have done things I am not very proud of in order to keep a relationship together
9 I have been close to people who did illegal things and I found excuses for what they did
6 I have had partners who didn't treat me very well
48 I don't let people get to know the real me
34 I have lied to protect people who are important to me
3 I have often done things without thinking them through properly and later regretted my decision

Factor III: Dependency within Relationships

40 I rarely go out or do anything without my partner
29 When I am in a relationship, I am totally Involved in it and expect the same from my partner
15 I have on many occasions, checked up to see where my partner is when he or she is not with me
24 I have often said hurtful things to people I love in order to get them to listen
19 I feel best about myself when I'm having a romantic relationship
54 It bothers me if my romantic partner wants to go out or do something without me
20 Often, others find things amusing that I don't consider funny
16 I tend to believe things people say and often find out later that they have lied

Factor IV: Dysfunctional Family of Origin

35 I was raised in a family where physical abuse occurred
12 I am not ashamed of my childhood
5 I had a happier childhood than most other people
2 I never try to help people unless I'm asked

Factor V: Anxiety

31 I quite often feel as if something dreadful is going to happen
60 I often feel as if I haven't' begun to live yet
39 Often I feel so nervous and tense that I feel dizzy
7 It seems to me I have spent my whole life trying to please others
4 I feel anxious or tense about something or someone almost all the time
30 Quite often I lose sleep worrying about people who are important to me
41 I am envious of most of the people I meet
44 Sometimes I have so many thoughts racing through my head that I can't make sense of of them
27 When things go wrong for others, I blame myself even when I shouldn't
38 When even little things go wrong, I usually get very upset and stay upset until everything is fine again
43 Some days there seem to be so many things going wrong that life seems hopeless
47 I have often gone to see a doctor about my depression